UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,699	11/22/1999	Naoyasu Miyagawa	JEL 28567RE-B	5446

7590 05/23/2003

Stevens Davis Miller & Mosher LLP
1615 L Street, NW
P.O. Box 34387
Washington, DC 20043-5100

EXAMINER
HINDI, NABIL Z

ART UNIT	PAPER NUMBER
2655	17

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS

AND INTERFERENCES

Paper No. 17

Application Number: 09/609699

Filing Date: Nov. 22, 1999

Appellant(s): Miyagawa et al

James Ledbetter

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed Jan. 15, 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 87 and 89-105 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 87 and 89-105 rejected under 35 U.S.C. 251. This rejection is set forth in prior Office Action, Paper No. 14.

(11) Response to Argument

Appellant's arguments have been carefully studied including and not limiting to the arguments drawn to *In re Wesseler, In re Clement, In re Hester* and *In re Pannu.*

The following remarks are written in conjunction with Pannu v. Storz Instruments, Inc. 258 F.3d 1366, 59 USPQ. 2d 1597 (Fed. Cir. 2001) format.

Background:

On August 05, 1991, Applicants filed a patent application for an optical apparatus, S/N 07/740,629 ('629 application). The '629 application discloses an optical disc recording, reproducing or erasing information signals onto/from a plurality of optical discs in which thickness of disc substrates are different. To accomplish the invention objective, the apparatus comprises the

use of N converging means whose aberrations have been corrected for N (N>2) disc substrates having different thicknesses. The apparatus also discloses the use of disc discriminating means for generating the disc thickness discriminating signal and a control means for selecting one of the converging means in which the occurrence of the aberration due to the disc substrate is smallest based on the discriminating signal.

Independent claim 1 of the '629 application as originally filed reads as follows:
An optical disc apparatus for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:
N converging means whose aberrations have respectively been corrected for said N (N>2) disc substrates having different thicknesses;
disc discriminating means for discriminating the thickness of the disc substrate of a loaded optical disc and for generating a discriminating signal corresponding to the result of the discrimination; and
control means for selecting the converging means in which the occurrence of the aberration due to the disc substrate is smallest in accordance with the discrimination signal.

The examiner rejected claims 1 and 6 as being anticipated under 35 U. S. C. 102 (e) in view of Nishiuchi et al (U. S Patent No. 5,097,464). The prior art reference shows each of the elements claimed in claims 1 and 6 as discussed in the Office action. Claims 1-30 were also rejected under

35 U. S. C 112, second paragraph, and the office action indicates that claims 2-5, and 7-30 were objected to as containing allowable subject matter if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. In response applicants filed an amendment **canceling** claims 1, 6, 11, 16, 21 and 26 and rewriting claims 2, 4, 5, 7, 8 and 9 in independent form.

During the prosecution of the U. S Patent No. 5,235,581, applicant did not rebut the examiner's rejection of claims 1 and 6 under prior art. In order for applicant to overcome the **prior art** rejection, an amendment canceling the rejected claims (claims 1 and 6) and amending claims 2, 4, 5, and 7-9 was filed. While applicant placed claims 2, 4, 5 and 7-9 in independent form; ***each claim was not written to include each and every limitation of base claim 1 it had previously depended from***. Claims were clearly amended so as to overcome ***both*** the 112- 2nd paragraph rejection and the prior art rejection. In addition, applicant argued what appears to be the patentable subject matter that defines over the prior art in claim 4; stating "control means *selects* one of the plurality of the light emitting means which are associated with the converging optical systems. By *selecting* one of the light emitting means, an aberration caused by the difference of the disc substrate thickness is minimized". Regarding claims 6 and 7 (reference to "claim 6" is deemed to be typo meant to refer to "claim 5" inasmuch as claim 6 was canceled) , applicant raised the issue that "control means is defined as generating a control signal which is provided to the selecting means in accordance with the discrimination signal".

It should be noted that applicant's arguments concerning claim 4 are inconsistent with the amendment in that the arguments are drawn to "*selecting*"; whereas the amendment to claim 4 *deleted the word "selecting" and replaced it with the word --**allowing**--*. It should also be noted that amendments to claims 2, 4, 5, 7, 8, and 9 were more substantive in nature than specifically argued in attorney remarks.

In response to the combination of amendments made to the claims, the examiner issued a Notice of Allowance and claims 2-5, 7-10, 12-15, 17-20, 22-25 and 27-30 issued as claims in U.S. Patent No. 5,235,581 ('581 patent).

For convenience, the independent claims of the '581 patent are reproduced below showing all of the changes (deletions shown by bracketing and additions shown by underlining) as made by Amendment "A", filed November 17, 1992:

Independent claim 2 (renumbered as claim 1) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means are objective lenses, and said apparatus comprises] for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) N optical heads, N being greater than or equal to 2, each [of which has] comprising:

light emitting means,

[one of said] objective lenses, whose aberrations have respectively been corrected for said N disc substrates having different thicknesses, each for converging the light flux which is emitted from the light emitting means onto the optical disc, and

a plurality of photo detecting means each for detecting the reflected light from the optical disc;

(b) N optical head moving means which are arranged below the optical disc and move N optical heads in the radial direction of the optical disc;

(c) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating [the] a discrimination signal in accordance with the result of the discrimination; and

(d) control means for selecting the optical head having the objective lens in which the occurrence of the aberration due to the disc substrate is smallest in accordance with the discrimination signal, [and] wherein the selected optical head records, reproduces[,] or erases the information signal onto/from the optical disc.

Independent claim 4 (renumbered as claim 7) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means are objective lenses, and wherein said apparatus comprises] for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) an optical head having N, N being greater than or equal to 2, converging optical systems each [of which is constructed by] comprising:

light emitting means,

[one of said] objective lenses, whose aberration have respectively been corrected for said N disc substrates having different thicknesses, each for converging the light flux which is emitted from the light emitting means onto the optical disc, and

a plurality of photo detecting means each for detecting the reflected light from the optical disc;

(b) optical head moving means which is arranged below the optical disc and moves the optical head in the radial direction of the optical disc;

(c) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating a discrimination signal [corresponding to] in accordance with the result of the discrimination; and

(d) control means for [selecting] allowing the light emitting means [of], which belongs to the converging optical system in which the occurrence of the aberration due to the disc substrate is smallest in accordance with the discrimination signal [and for allowing said light emitting means], to emit [the] light,

[and] wherein the selected converging optical system records, reproduces[,] or erases the information signal onto/from the optical disc.

Independent claim 5 (renumbered as claim 10) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means are objective lenses, and wherein said apparatus comprises] for recording, reproducing, or erasing

an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) an optical head [having] including:

light emitting means,

light flux dividing means which are arranged in the light flux from the emitting means and divide the emitted light flux into N, N being greater than or equal to 2, light fluxes and deflect in different directions,

[said] N objective lenses, whose aberrations have respectively been corrected for said N disc substrates having different thicknesses, for respectively converging said N light fluxes onto the optical disc,

light flux selecting means for selecting one of the N light fluxes divided by the light flux dividing means [in accordance with a control signal] and for allowing said light flux to pass, and

photo detecting means for detecting the light fluxes reflected from the optical disc;

(b) optical head moving means which is arranged below the optical disc and moves the optical head in the radial direction of the optical disc;

(c) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating [the] a discriminating signal in accordance with the result of the discrimination; and

(d) control means for generating [the] a control signal to the light flux selecting means in accordance with the discrimination signal and for selecting the light flux which passes through the objective lens in which the occurrence of the aberration due to the disc substrate is smallest,

[and] wherein the optical head records, reproduces[,] or erases the information signal onto/from the optical disc by the selected light flux.

Independent claim 7 (renumbered as claim 13) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means is converging grating couplers formed on an optical waveguide, and wherein said apparatus comprises] for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) an optical head [having] including:

[said] an optical waveguide formed on a substrate,

N light emitting means each for emitting a waveguide light into [the] said optical waveguide, N being greater than or equal to 2,

[said] N converging grating couplers, whose aberrations have respectively been corrected for said N disc substrates having different thicknesses, each for emitting the waveguide light supplied from said N light emitting means to the outside of the optical waveguide and for allowing the reflected light from the optical disc to enter, and

N photo detecting means each for detecting [the] reflected light and for generating [as] an information signal;

(b) optical head moving means which is arranged below the optical disc and moves the optical head in the radial direction of the optical disc;

(c) selecting means for selecting the light emitting means to be allowed to emit the light from among the N [light] emitting means [in accordance with a control signal];

(d) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating [the] a discrimination signal according to the result of the discrimination; and

(e) control means for generating [the] a control signal [to the selecting means] in accordance with the discrimination signal, for providing said control signal to said selecting means and for allowing the light emitting means for emitting the waveguide light into the converging grating coupler in which the occurrence of the aberration due to the disc substrate is smallest [to emit the light], [and] wherein the optical head records, reproduces[,] or erases the information signal onto/from the optical disc by the light flux from the selected light emitting means.

Independent claim 8 (renumbered as claim 16) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means is converging grating couplers formed on an optical waveguide, and wherein said apparatus comprises] for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) an optical head [having] including:

[said] an optical waveguide formed on a substrate,

light emitting means for emitting a waveguide light into said optical waveguide,

light flux dividing means for dividing the waveguide light emitted from the light emitting means into N [division] divided waveguide lights, N being greater than or equal to 2,

said N converging grating couplers, whose aberrations have respectively been corrected for said N disc substrates having different thicknesses, each for emitting each of [the] said N divided waveguide lights to the outside of the optical waveguide and for allowing the reflected light from the disc to enter, and

N photo detecting means for respectively detecting [the] said reflected lights from the N converging grating couplers and for generating [as] information signals;

(b) optical head moving means which is arranged below the optical disc and moves the optical head in the radial direction of the optical disc;

(c) output switching means for selecting and outputting one of the output signals of said N photo detecting means [in accordance with a control signal];

(d) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating [the] a discrimination signal in accordance with the result of the discrimination; and

(e) control means for generating [the] a control signal to the output switching means in accordance with the discrimination signal and for selecting the photo detecting means into which the waveguide light enters from the converging grating coupler in which the occurrence of the aberration due to the disc substrate is smallest [enters].

Independent claim 9 (renumbered as claim 19) of (U. S Patent No. 5,235,581):

An optical recording/reproducing apparatus [according to claim 1, wherein said converging means is converging grating couplers formed on an optical waveguide, and wherein said apparatus comprises] for recording, reproducing, or erasing an information signal by converging a light flux onto/from a recording layer through a transparent disc substrate, comprising:

(a) an optical head [having] including:

[said] an optical waveguide formed on a substrate,

light emitting means for emitting a waveguide light into said optical waveguide,

optical path switching means which is arranged on an optical path of [the] said waveguide light and switches the propagating direction of the waveguide light in N directions in accordance with a control signal, N being greater than or equal to 2,

[said] N converging grating couplers, whose aberrations have respectively been corrected for said N disc substrates having different thicknesses, and which are respectively arranged in said N propagating directions which are switched by said optical path switching means and emit the waveguide light to the outside of the optical waveguide and allow the reflected light from the optical disc to enter, and

photo detecting means for [generating] detecting the reflected light [as] and generating an information signal;

(b) optical head moving means which is arranged below the optical disc and moves the optical head in the radial direction of the optical disc;

(c) disc discriminating means for discriminating the thickness of the disc substrate of the loaded optical disc and for generating a discriminating signal in accordance with the result of the discrimination; and

(d) control means for generating [the] a control signal to the optical path switching means in accordance with the discrimination signal and for switching the propagating direction of the waveguide light from the light emitting means to the direction of the converging grating coupler in which the occurrence of the aberration due to the disc substrate is smallest,

[and] wherein the optical head records, reproduces[,] or erases the information signal onto/from the optical disc by the light flux emitted from the selected converging grating coupler.

On November 22, 1999 appellant filed this reissue application of the '581 patent. The reissue claims 87, and 89-105 have deleted subject matter that applicants previously surrendered during the prosecution of the '581 patent. Thus these claims are rejected as impermissibly recapturing previously surrendered subject matter as follows:

Claims 87 and 89-105 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Hester Industries, Inc.* v. *Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement,* 131 F.3d 1448, 45 USPQ2d 1164 (Fed. Cir. 1997); *Ball Corp.* v. *United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening

aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

The recapture rule "prevents a patentee from regaining through reissues the subject matter that he surrendered in an effort to obtain allowance of the original claims". *In re Clement,* 131 F.3d 1448, 45 USPQ2d 1164 (Fed. Cir. 1997). Reissued claims that are broader than the original patent's claims in manner directly pertinent tot eh subject matter surrendered during prosecution are impermissible.(Mentor, 998 F. 2d at 996, 27 USPQ2d at 1525).

During the '581 patent prosecution, the rejected claims 1 and 6 (in addition to claims 11, 16, 21 and 26) were canceled and claims 2, 4, 5, and 7-9 were amended (see paper# 6 filed Nov. 17, 1992) to overcome a prior art rejection. The newly added limitations included for example, "N optical heads, N being greater than or equal to 2"; "objective lenses whose aberration have respectively been corrected for said N disc substrates having different thicknesses"; " a plurality of photo detecting means", "control means for allowing" and "control means for providing said control signal to said selecting means and for allowing the light emitting means for" which have now been removed from claims provided in the present reissue application. This constitutes an

improper recapture of the claims, see Pannu v. Storz Instruments, Inc. 258 F.3d 1366, 59 USPQ. 2d 1597 (Fed. Cir. 2001).

The broadening aspect of the reissued claims is directly related to surrendered subject matter. The pending independent reissue claims 87, 89, and 98 recite "converging means having M different effective numerical apertures for converging said light flux on said second layer" (claim 87 lines 8-9, claim 89 lines 9-10 and claim 100 lines 9-10 and not the use of the surrendered subject matter "N converging means (objective lenses) who's aberration have respectively been corrected for said N (N>2) disk substrates having different thicknesses".

Furthermore, the reissue claims 87, 89, 96, 98 and 100 are also broader in some aspects in that claims 87, 89, 96, 98 and 100 do not recite the limitations "disk discriminating means for discriminating the thickness of the disk substrate of a loaded optical disk and for generating a discrimination signal"nor recite the limitation "control means for selecting the optical head having the objective lens in which the occurrence of the aberration due to the disk substrate is smallest in accordance with the discrimination signal" as amended during the prosecution of the '581 patent application to overcome the prior art rejection.

The reissue claims recite the use of "Photo detecting means" as opposed to the use of "plurality of photo detecting means", and "light emitting means" as opposed to "plurality of light emitting means". The reissue claims do not recite the surrendered subject matter "control means selects one of the plurality of light emitting means which are associated with the converging optical

systems" as amended by applicant to overcome the prior art rejection.. Thus reissue claims are indeed broader in at least some aspects which are germane to a prior art rejection given to original claim 1 during the prosecution of the '581 patent.

CONCLUSION

Independent reissue claims 87, 89, 96, 98 and 100 are all broader in scope in some aspects, but narrower in others than the claims of the '581 patent. For these types of situations, MPEP 1412.02 advises that:

> "Reissue claims that are broader in certain aspects and narrower in others vis- à-vis claims canceled from the original application to obtain a patent may avoid the effect of the recapture rule if the claims are broader in a way that does not attempt to reclaim what was surrendered earlier. Mentor Corp. v. Coloplast, Inc., 998 F.2d 992, 994, 27 USPQ2d 1521, 1525 (Fed. Cir. 1993). ***"[I]f the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim;*** [] if the reissue claim is narrower in an aspect germane to [a] prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible." Clement, 131 F.3d at 1470, 45 USPQ2d at 1165.

In order to determine if the amended subject matter is "germane to a prior art rejection", the examiner followed the examples set forth in section 1412.02 of the MPEP. Furthermore, the appellant's arguments made in the brief are not persuasive. The appellant's arguments in the brief state that none of the newly added limitations provided during the prosecution of the patent "stand alone" to overcome the prior art rejection; and therefore he argues that they "cannot be considered even in combination with other elements an 'aspect germane to the prior art rejection'." yet the appellant has provided no other reasons or argued any other limitations which would have deemed them to be allowable.

Appellant arguments also set forth:

"Although no expressly stated in Clement, another category (c) exists, i.e. where the reissue claim is as broad as or broader than the canceled or amended claim in an aspect germane to a prior art rejection and narrower in another aspect germane to the prior art rejection; in such case the recapture rule may not bar the claim." and

"under In re Clement, if there is both germane narrowing and germane broadening of such combinations of features, there is no recapture bar and the present reissue claims should be allowed.".

As stated in appellant's arguments above, there is no category (c) in In re Clement. Appellant has made up this category in order to support his position. Appellant's arguments inherently admit that claims are broadened in manners that are indeed germane to the issue of patentability; and deems that this is not recapture because it is also narrowed in another aspect that is germane with respect to patentability. This interpretation of In re Clement is entirely unsubstantiated by any decision cited and in fact, is entirely contrary to the teachings provided in the discussion of the decision in In re Clement discussed in MPEP 1412.02. Accordingly, Appellant's arguments are not found to be persuasive. The decisions cited and discussed in MPEP 1412.02 clearly address the handling of reissue claims which are broader in some aspects, but narrower than others; which is the situation in this particular reissue application.

The examiner has properly applied the criteria for determining whether or not subject matter is surrendered and it is the examiner's opinion based on the required analysis that the **amendments made to the claims during the prosecution of the patent were indeed germane in overcoming the prior art rejection on the**

record; accordingly the broadening aspect of the claims in this reissue application therefore constitutes impermissible recapture.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Nabil.hindi

NABIL HINDI
PRIMARY EXAMINER
GROUP 2600

Appeal Conference conferrees

DORIS H. TO 5/20/03
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

KRISTA ZELE
SPECIAL PROGRAM EXAMINER
TECHNOLOGY CENTER 2600